Introduction

In 1993, a Federal Leadership Award was presented to the National Center for Health Statistics (NCHS) for the innovative development of the Statistical Export and Tabulation System (SETS). The award recognized an "outstanding achievement in making government more effective through the use of information systems."

With the release of SETS 2.0, NCHS continues its commitment to provide access and tabulation capabilities to users of large data files. This new software incorporates a number of improvements and is optimized for use with Windows 95, 98 and Windows NT.

What is SETS 2.0?

SETS 2.0 provides the tools to release large data files and documentation on CD-ROM with an easy to use interface. Users can manipulate data according to their analytic needs without additional software. They may examine individual records and files, create data subsets, browse, search, display, tabulate, chart, print, extract, and export data in a variety of formats.

The complete SETS 2.0 package consists of four components:

1. *SETS 2.0 Designer Kit* -- programs used for compiling, indexing and releasing data files and documentation.
2. *SETS 2.0 Editor* -- a powerful stand-alone ASCII editor for use in examining and editing large data files.
3. *SETS 2.0 Interface* -- programs for accessing data files and documentation released in SETS format.
4. *SETS 2.0 QuickTab* --- a compact version of the interface used only for rapid tabulation of data files.

Data Available in SETS 2.0

This CD-ROM contains all four components of the SETS 2.0 package including the *SETS 2.0 Designer Kit*. All data files released on CD-ROM by NCHS using earlier versions of SETS are accessible using the *SETS 2.0 Interface*. More information on the availability, cost and ordering procedure for other NCHS products, may be found at the National Center for Health Statistics website at http://www.cdc.gov/nchswww/products/catalogs/subject/cdprice.htm, or call **301-436-8500**.

Before You Get Started

To use SETS 2.0 you must have the following equipment:

- Microcomputer with a Pentium processor
- Microsoft Windows 95, 98, or Windows NT 4.0 or greater with NT service pack 4.0 or greater
- Microsoft mouse or equivalent pointing device
- At least 16 Mb of available random access memory (RAM)
- Hard disk drive containing at least 40 Mb of free space
- VGA color monitor with resolution of 640 x 480
- A CD-ROM drive compatible with your system
- Windows-supported graphics-capable printer

In order to take full advantage of the latest SETS 2.0 software, please check to see that you have revision 777 installed. This number can be found on the opening screen of SETS 2.0 on this CD-ROM. If you have an earlier release or are unsure, we recommend that you proceed to reinstall the software.

WARNING: Do NOT attempt to install a new version of SETS, without first completely uninstalling the old version. See the following instructions.

To remove an earlier version of SETS:

Go to the **Windows desktop**:

Click **Start Settings Control Panel**.
Click **Add/Remove Programs**.
Click on **SETS** in the program listing.
Follow the prompts to remove **ALL** files.
Click on the **Add/Remove...** button.
Click **Yes** to remove **ALL** shared files.

Installing SETS 2.0

1. **First close all programs currently running and make sure that you do not have an active LAN connection**. If all programs are not closed when you install SETS 2.0, your system may be disrupted.
2. Place the CD-ROM into your CD drive and from the Windows desktop, click **Start Run**.
3. In the box that appears, type the letter that corresponds to your CD drive followed by :\SETS2\setup. (For example, **D:\SETS2\setup**, if your CD-ROM drive is designated to drive D.)
4. Click **OK** and follow the installation prompts. At the screen titled **"Select SETS environment to install",** select *SETS Designer Kit* to install all components. When all files have loaded successfully, reboot your system. After reentering Windows, you will see a folder containing the SETS programs. These icons can be dragged over to the desktop from the folder for easier access.

5. During the installation process, SETS also creates a SETS work directory on your hard drive. You can use this directory to store tables, recodes, exported files and the like. The directory also contains a subdirectory called **Samples** including a number of files. These files have extensions as .sdl, .dat, and .val. These are the basic files a designer would create to enable SETS 2.0 to *compile* and *index* data to be released and accessed using the SETS 2.0 interface. We have included the files to build **CARS 1994, a sample set of 1994 Underlying Cause of Death Records containing Age, Race, Sex and Cause of Death coding for 72 causes .** NCHS offers this feature to assist users in learning SETS principles on a small data set.

Opening the SETS Designer Kit/Indexing Cars 1994

1. Double-click the SETS 2.0 Designer Kit from the SETS folder.
2. Select **File Open** C:\SetsWork\Samples**Cars1994.sdl**

3. Examine the contents of this .sdl file to become familiar with conventions that will be used in all .sdl files.
4. Click on **Build** **Compile**. Your software will compile and create an audit trail that you may view.
5. Click on **Build** **Index** . At the *"selecting a compiled set for indexing"* screen click on **CARS1994.set** **Open**. The indexing screen will open with many tab selections. You do not need to select any of these options with this sample set. Click on **Start.** Your files will index and an audit trail file will be created. You may view this file to identify any problems that may have occurred in the indexing process.
6. You have now successfully built a SET containing the Cause of Death sample records. **Note:** *the following steps will lead you through testing this file and becoming familiar with the SETS interface. We strongly recommend that if you are going to build your own data sets using the* ***SETS 2.0 Designer Kit*** *and the* ***SETS 2.0 ASCII Editor*** *you first become familiar with the extensive help files contained in these products. It may be helpful to print out these files for reference*.
7. Click on **Build** **Test**. Select **CARS1994.set** **Open**

8. You may also test by opening SETS Interface from the SETS folder and selecting this set
9. After opening a screen with the name of the data set will appear.
10. Click the **Press any key or click to continue** box. A copy of the data use restrictions will open. Read the restrictions and click on the appropriate box. If you click on the agree button, the data set will open.

NOTE: The screen captures in the following documentation will not reflect the exact data set of the CARS1994 set they are to be used for illustration only. If problems occur please refer to the help files contained in the software or contact NCHS at 301-436-8500. Our technical assistance coordinator is Ms. Linda Bean. Our software designer is Mr. Robert Sloss.

Help with SETS

SETS provides the user with automatic tips for using the software. Place the cursor over an icon at the top of the screen and a label will appear explaining the function of the icon. If a question should arise, there are three ways to find an answer.

To search by topic, go to Help in the pull-down menu and click **Help Contents**.

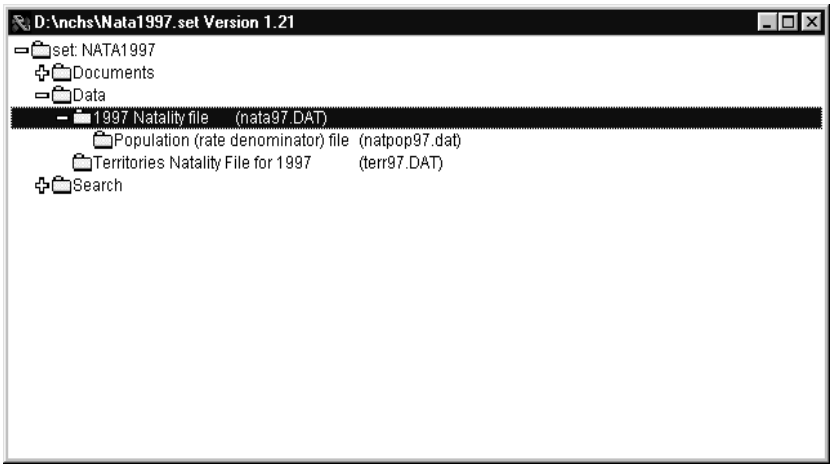
To search with an index, go to Help in the pull-down menu, and click **Help Search**. Then type in the first few letters of the help subject. Click **OK**.

To receive assistance on something specific, highlight the area you need more information on and then press **F1**, located on the top right corner of your keyboard.

NOTE: The About option in the Help menu provides SETS 2.0 program and version information.

Opening a File

Click the **+** sign to the left of the folder you would like to open. A list of the available files will appear below the folder name. For **documentation files**, click once on the **+** sign to the left of the folder, if applicable, or on the **name** of the document



Opening Screen

you would like to open.

For **data files**, click once on the **+** sign to the left of the folder, if applicable, or on the **file** you wish to open Browse, Tabulate, Export or Extract data, depending on your needs.

Browsing and Searching Documents

This feature of SETS provides the user with information on the data collection process, a description of the survey and the fields, as well as other relevant information needed for analysis.

To browse and search a single file:

At the opening menu, click the **+** sign to the left of the **Document** folder.

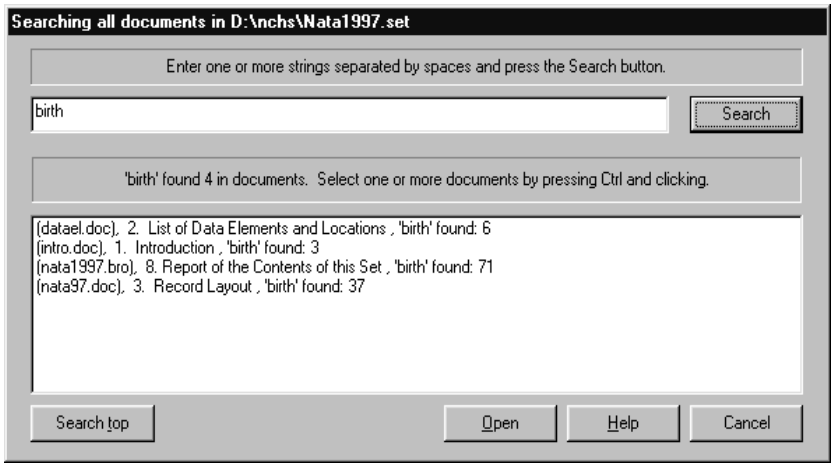
Click once on the file you wish to open.

To search the documentation file for a specific term, you may:

a. Click **Search** on the menu bar **Document**, or

b. Double-click the cursor on the term, or

c. Click the search  button on the button bar.



Global Search Result Screen

Click the button that corresponds to the type of search you would like conducted.

To browse and search multiple files:
At the opening menu, click the **+** sign to the left of the **Search** folder **Global document search**.

Enter the term(s), separated by spaces, you wish to search.
Press **Search** or Enter.
The search will provide a list of the files that contain the specific term(s) entered. The file name, file description, and the number of times the term is found are provided as well.
Click on the file you wish to view and **Open**. Although the *Search results* box closes, the results of your search are still displayed under the Search folder in the data set window.

NOTE: If printed documentation tables are not aligned, cut and paste them in an application such as WordPad and use LinePrinter font to print.

Browsing and Searching Data

To view the data set or a subset.

At the opening menu, click the **+** sign to the left of the word Data, to list the data files.

Click on a **file** name **Browse data**.

This command displays the records, with horizontal red lines separating the individual records, and vertical red lines separating the fields within records. The field and value labels appear in the window at the bottom of the screen.

For a description of the field and record value, double-click on the corresponding field. If you click **Select**, you will select a subset of those records. The number of records selected will be shown in the left hand corner of your bottom window.

NOTE: If you want to save the subset expression to your hard drive, click **Save** before selecting the records. Saved subsets can be loaded later for tabulation or export.

When a search yields multiple records, the first record will appear. To locate the next record-- **do NOT use the arrow keys**--you must click on the search for next match button  .

Making Tables

These instructions will walk you through the process of building a simple table using the SETS 2.0 Template. Experienced users may not need to use this template, and can choose the **Advanced** option. Additionally, users wishing to make many tables may want to use the *QuickTab table generator* from the SETS folder.

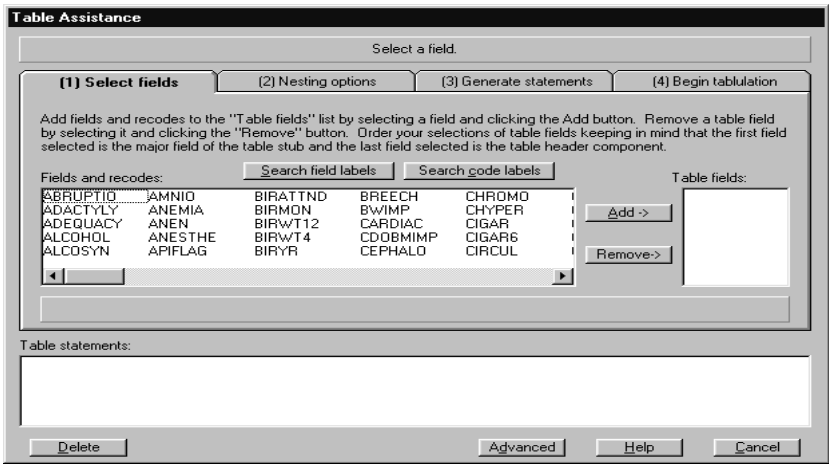


Table Assistance Template

1. At the opening menu, click the **+** sign to the left of the **Data** folder. Names of data files drop down. Click on a **file** name **Tabulate data**. This command will provide you with an empty spreadsheet to build a table.
2. To select a subset of records, see *Selecting Records* on page 20. To recode fields, see *Recoding Fields* on page 22.
3. On the menu bar, click **Table Assist**, which opens the *Table Assistance* window. Complete steps 1-4 below.

   (1) Select fields: Choose the fields, for the variables, you wish to use to build the table.

   The order that the fields appear is important, as the first field name will make up the y-axis of your table.

   You may add and remove field labels by highlighting the field and clicking on the appropriate button, or by double-clicking on the actual field name in the *Fields and recodes* listing.

   Once the fields have been selected, click on the **#2** tab.

NOTE: SETS 2.0 will tabulate a two-way table. If you are selecting multiple fields, consider creating a series of tables.

(2) Nesting options. Select the counts, percent or rates box(es), as needed. Also, select or change weights or rates, if needed. Click the **#3** tab to continue.

(3) Generate statements.

If needed, check the **Abbreviate** box. (See explanation provided on the template).

Click the **Generate** button. The table statements selected will appear in the *Table selection* box. Check the statements to make sure the fields and nesting options were correctly chosen.

The resulting table will produce data according to the specifications chosen in *Selecting fields* and *Nesting options*.

To generate another table, go back to (1) *Select fields* and repeat steps 1 through 3.

Click on the **#4** tab to continue.

(4) Begin tabulation.

Check the **Labels** box, to provide the full name(s) of the variable(s) chosen.

Check the **Zero's** box, to include rows where the cells have a zero value. Otherwise, the rows that include a zero value will be excluded.

Check **Exprs** to display the formula used for generating rates.

Click **Begin**, when ready to build the table. SETS will begin to generate the table.

Once SETS has tabulated the data, a screen will pop-up and notify you that the table is done. Click **OK**. (Note: to stop the program, go to **Table Stop**)

Finished tables can be saved or printed in various formats, including Excel.

NOTE: You can only save to Excel 4.0, as versions 5.0 and 7.0 do not work in this revision of SETS 2.0.

Selecting Records

Selecting records allows you to select a subset of records for tabulating or exporting data. If subsetting is necessary, it must be completed before making a table.

1. At the opening menu, click the **+** sign to the left of the **Data** folder. Names of data files drop down. Click on a **file** name **Tabulate data**. This command will provide you with an empty spreadsheet to build a table.
2. Select **Records Select**.
3. Click **Assist**.
4. To select from the field list, type in the field name or left-click twice to display the list and select the appropriate field names.
5. To select from the code list, type in the code value or left-click twice. For instance, if you want to select a subset of women, double-click on the sex field under the field list and the code for female under the code list.

You may select from the following operators:

= equal to
!= not equal to
< less than
> greater than
>= greater than or equal to
>= less than or equal to
: in ("in" operators are used to collect records in or not in an interval)
!: not in

6. If you have more than one criteria for the subset, make sure to chose the appropriate connector.
7. For a list of the total records found matching the criteria selected, click **Refresh**.
8. Click **Accept**.
9. Click **Select** to collect the records of the subset. (Once records have been selected, you may change your selection by choosing **Records Clear**. To select new records, you must repeat the records selection process.)

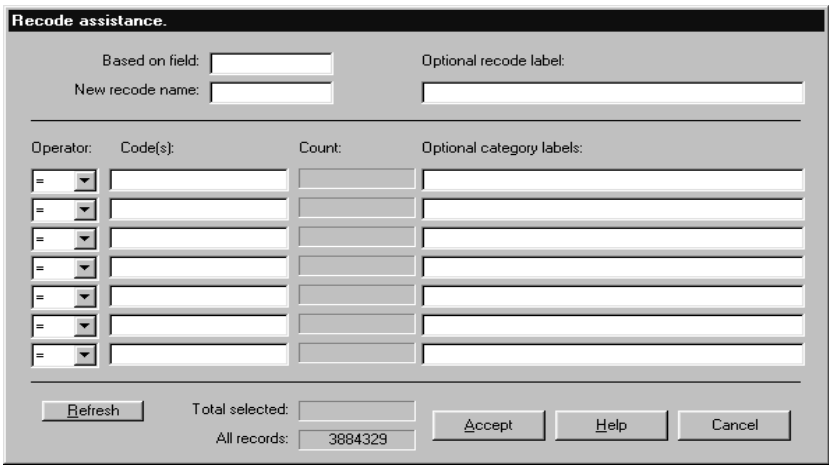
NOTE: The system will not retain a selected subset. Changing to a different option (such as from Tabulate to Export) will clear the selected subset. Save the expression to the hard drive before selecting the records. The subset expression can be loaded at a later time, for use with another option.

Recoding Fields

Recoding is used to create new groupings of fields not available in the data file. For instance, one may want to recode age to two groups, one under 50 years of age and the other 50 and older. If recoding is necessary, it must be completed before making a table.

1. At the opening menu, click the **+** sign to the left of the **Data** folder. Names of data files drop down. Click on a **file** name **Tabulate data**. This command will provide you with an empty spreadsheet to build a table.
2. Click **Recodes** **Create**.
3. Change the drive from the CD-ROM drive to your appropriate drive for storing data. Name the recode file and click **Open**.
4. Click **Recodes** **Assist**.

Double-click on the **Based on the field** box and double-



Recode Template

click on the appropriate field. Type in the name for the recode in the **New recode name** box.

Double-click on the **Code(s)** box and select the appropriate code value(s). Click **Select** to bring up the *Recode assistance* template. When finished coding, click **Accept**.

5. The code will appear. To accept it, click **Recode Attach**. Click **File Close**.
6. Check to see that the recode appears in the field list by clicking **Table Assist**, which opens the *Table Assistance* window. Scroll down the fields and recodes list and find the recode listed alphabetically. If you do not see the recode listed click **Cancel**, and go to **Recodes Create**. Click **Yes**. Go to **Recodes Check Syntax**.

Charting Data

Formula One Workbook Designer, by Visual Components, Inc., developed the charting component used in SETS 2.0. The designer provides assistance with charts, graphs, plots and other graphics.

1. From the spreadsheet table, double-click the right mouse on the table you would like to chart. This will bring up the *Formula One Workbook Designer* window.

2. Holding the left mouse down, **highlight the data** you wish to chart.
3. Click on the **chart button**  (rightmost button on the toolbar), then click on an empty area, and hold the left mouse down, to open a box where you wish to place the chart on the page.
4. Release the mouse and the *Chart Wizard* window will pop up.
   Choose the appropriate type of chart and click **Next**.
   Choose the appropriate style and click **Next**.
   Choose the layout and click **Next**.
   Enter the desired titles and click **Finish**.
5. To edit the chart, use the left mouse to click on the elements you wish to change. A dialog box will appear to assist you.

Exporting and Extracting

Data can be exported or extracted from SETS 2.0.

Exporting	***Extracting***
Finer control over records and fields. Fields are exported in a non-overlapping format. Records are only in a fixed length, carriage return, line feed delimited format under the ASCII export. Various binary formats are available under the data base export.	Faster. All fields are exported in the original format. Records are fixed length, non-delimited stream of bites. Fields can also be delimited with carriage returns and line feeds. Trailing spaces can be removed, or records padded.

Exporting

Data from SETS 2.0 can be exported into: (1) ASCII files for use in SAS, SPSS, EPIInfo and Beyond 2020, as well as (2) specific database and spreadsheet formats, such as dBASE, Excel, FoxPro, Jet, Lotus and in a text format.

1. Open SETS 2.0 and the data set, as shown previously.
2. Click on the **+** to the left of the **Data** folder. Names of data files drop down. Click on a file name, then from the resulting box, click **Export data Data base OR** click **Export data ASCII**, depending on the format desired.
3. Several windows are opened. The window on top is labeled *Selecting fields for export from cars1994.dat*. With this window open, you may limit the data in your exported file to certain fields or the complete data set.

   You may select individual fields, by double-clicking on the field.

   You may select several fields by typing in the field names or holding down the **Control** key while selecting the desired fields.

You may also hold down the **Shift** key, to select a group of fields that are listed together.

You may select all of the fields by clicking on **Name** (located directly above the field labels list).

4. Click **Select**. All of the selected field names will appear in the *Field list for base file* box.
5. When prompted, click **Yes** to select a subset of records based on the fields listed in the above box. Follow the procedure for *Selecting Records* (see page 20). When prompted, click **Yes**.

If exporting to data base or spreadsheet formats:

Click the appropriate export format. Click **Select**.

Type the file name with its path in the space indicated. For example, c:\test1. Click **Open**.

A status bar displays the progress of the export. When the file has been exported, you will be offered the option of viewing the exported file. Click **Yes** to open the files.

If exporting to an ASCII file:

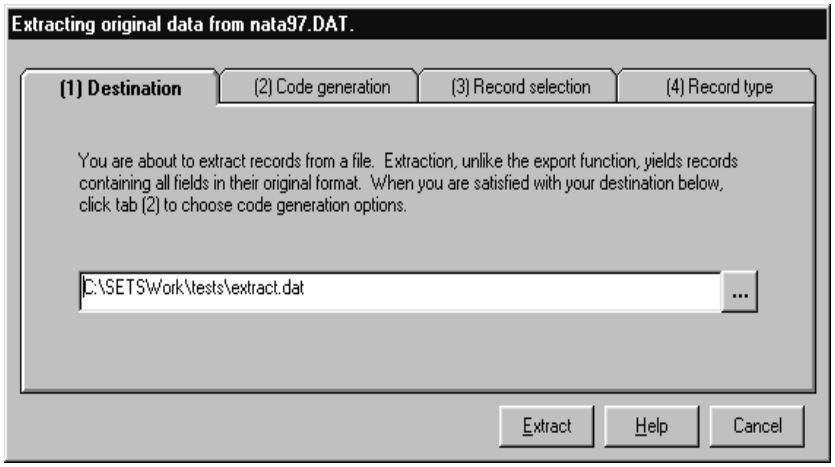
Type the file name with its path in the space indicated. For example, c:\test1. Click **Open**.

Check the destination of the export to make sure the data will be exported to the correct destination. Check the **Write codebook** box. Click the **Source code generation** tab and choose the options you wish to have generated. Then click **Export**. A status bar displays the progress of the export. When finished exporting, a window will pop-up, click **Yes** to open the files.

Extracting

When extracting data, you may choose to extract all of the records, a range of the records or every nth record from the original format.

1. At the opening menu, click the + sign to the left of the word Data, so the names of data files drop down.
2. Click on a file name Extract data.
3. Select the destination drive for storing the extracted data.
4. Name the file and click Open. This will bring up the *Extracting original data* template. Follow the instructions in order of the destination, code generation, record selection and record type tabs.



Extraction Template

(1) Destination: Verify the destination listed in the *Destination* window by clicking on the **#2** tab.
(2) Code generation: Check the desired option boxes and click on tab **#3.**

(3) Record selection: Choose to extract all of the records or a subset of them, as directed in the window. Click on tab **#4.**

(4) Record type: Check the options, as per the instructions in this window.

5. Click **Extract**. When SETS finishes the extraction, you will return to the Opening menu and the extracted fields will be stored, as designated.